CDX-R77

SERVICE MANUAL

US Model
Canadian Model
E Model

Model Name Using Similar Mechanism	NEW
CD Drive Mechanism Type	MG-200A-33

General

Power requirements
12 V DC car battery (negative ground)
Current drain
800 mA (CD playback)
2 A (during disc loading or eject)
Operating temperature
−10°C-50°C (15°F-120°F)
Dimensions
CD player:
Approx. 178 × 50 × 149 mm (w/h/d) (7 1/8 × 2 × 5 7/8 in.)
Weight
Approx. 1.6 kg (3 lb 8 oz)
Tone controls
Bass ±10 dB (100 Hz)
Treble ±10 dB (10 kHz)
Supplied accessories
Mounting hardware (1 set)
Optional accessories
Mounting kit
Cleaning cloth XP-CD1

CD player section

System
Compact disc digital audio system
Frequency response
5-20,000 Hz ±3 dB
Harmonic distortion
0.015% (1 kHz)
Dynamic range
85 dB
Signal to noise ratio
85 dB
Wow and flutter
Below measurable limit
Laser Diode Properties
Material
GaAlAs
Wavelength
780 nm
Emission Duration
Continuous
Laser out-put Power
Less than 44.6 μW*
* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

Tuner section

		FM tuner section	AM tuner section
Tuning range	The model for the U.S.A and Canada	87.9-107.9 MHz	530-1,710 kHz
	The model other than for the U.S.A and Canada	87.5-108.0 MHz	531-1,602 kHz (9 kHz area) 531-1,620 kHz (10 kHz area)
Antenna terminal		FM/AM external antenna connector	
Usable sensitivity		12 dBf (1.1 μV/75 ohms	35 μV
Selectivity		75 dB at ±400 kHz	———
Signal-to-noise ratio		70 dB (monaural) 65 dB (stereo)	55 dB
Harmonic distortion at 1 kHz		0.3% (monaural) 0.5% (stereo)	0.3%
Stereo separation		35 dB	———
Frequency response		30 Hz-15,000 Hz ±3 dB	

Design and specifications subject to change without notice.

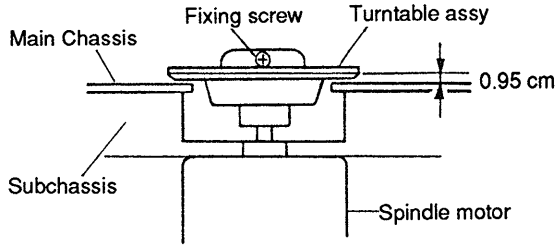
FM/AM COMPACT DISC PLAYER

SONY®

SECTION 4
ADJUSTMENTS MECHANICAL

Turntable Height Adjustment

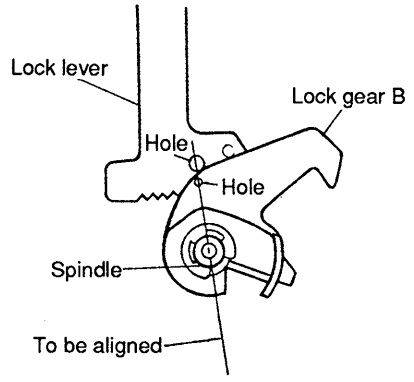
Loosen the fixing screws and adjust the height to the specification illustrated.



Lock Gears (A and B) Installing Adjustment

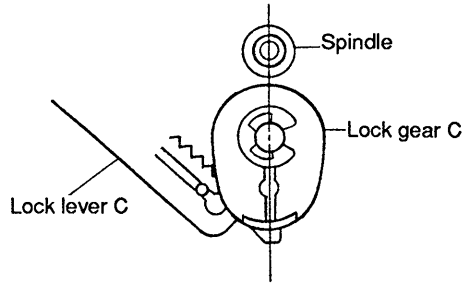
Since installing lock gears A and B is the same, only lock gear B is described below.

1. Rotate the gear near the motor with your fingers to move the optical section toward the external circumference.
2. Continue to rotate the gear until the lock gear is disconnected from the notch of the chassis and stops.
3. Fix the lock gear so that the holes of the lock lever and the lock gear and the spindle are roughly aligned.



Lock Gear C installing Position Adjustment

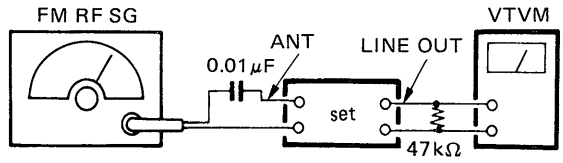
1. Rotate the gear near the motor and move the optical section toward the external circumference.
2. Continue to rotate the gear until the lock gear is disconnected from the notch of the chassis and stops.
3. Fix lock gear C so that the spindle, the lock gear C fixing axis and the center of the lock gear C projection are roughly aligned.



SECTION 5
ELECTRICAL ADJUSTMENTS

Pilot cancel adjustment

Adjustment:

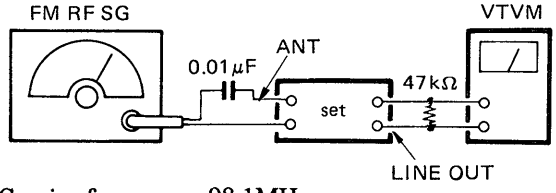


Carrier frequency: 98.1MHz
Output level: 1mv (60dB)
Mode: Stereo
Modulation: Pilot signal 19KHz, 7.5KHz deviation (10%)

Procedure:
1. Tune-up at 98.1MHz
2. Adjust RV602 so that the VTVM reading is minimum.

FM stereo separation adjustment
Conditions:
BAND SWITCH FM STEREO
FREQUENCY 98.1MHz

Adjustment:



Carrier frequency 98.1MHz
Mode Stereo
Modulation Main channel: 1KHz, 33.75KHz deviation (45%)
Pilot signal: 19KHz, 7.5KHz deviation (10%)
Subchannel: 1KHz, 33.75KHz deviation (45%)
Output lever 60 dB (1mV)

Procedure:

FM Stereo SSG Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	(A)
R-CH	L-CH	Adjust RV601 so that the VTVM reading is minimum. (B)
R-CH	R-CH	(C)
L-CH	R-CH	Adjust RV601 so that the VTVM reading is minimum. (D)

Note: The separation values in the two channels should be identical.
(A) – (B) = (C) – (D)

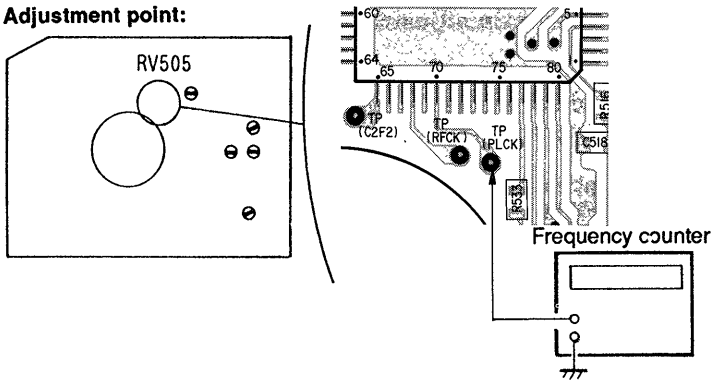
PLL free-run frequency adjustment

Adjustment:

1. Remove the soldering bridge (EFM) from the MD main board.
2. Connect the frequency counter to test point (PLCK).
3. Turn the power on and adjust RV505 so that frequency counter reading satisfies the specification.

Adjustable limits: 4.3118 to 4.3318MHz

Adjustment point:

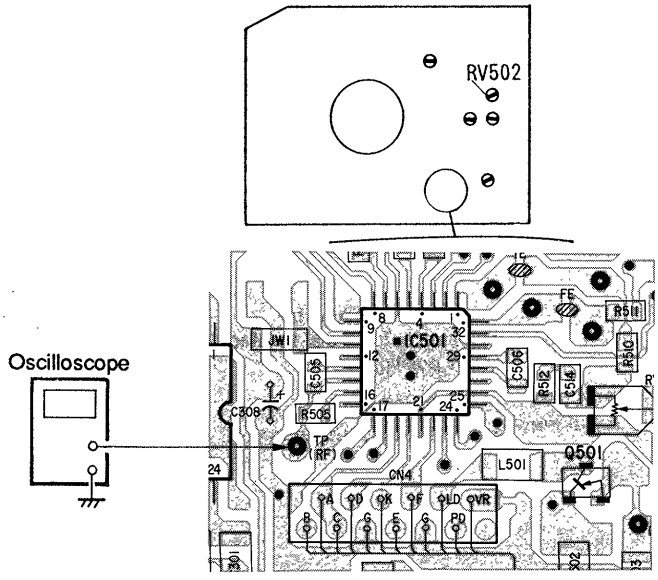


Focus offset adjustment

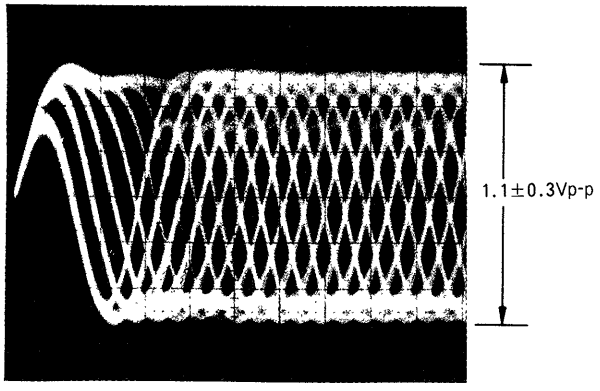
Adjustment:

1. Connect the oscilloscope to test point RF on the MD main board.
2. Load a disc and set mode to PLAY.
3. Adjust RV502 so that the waveform on the oscilloscope (eye pattern) is maximum with good shape. "Well-shaped eye pattern" means that the mark " ◇ " is clearly distinguished at the center of the waveform.

Adjustment point: MD main board



Volt/div: 200mV
Time/div: 0.5μsec

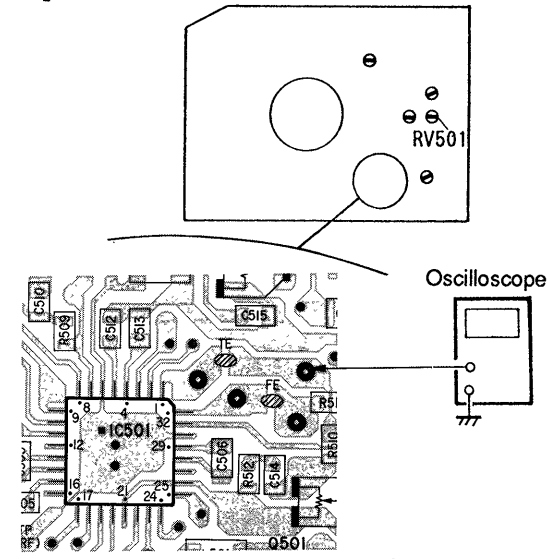


Tracking offset adjustment

Adjustment:

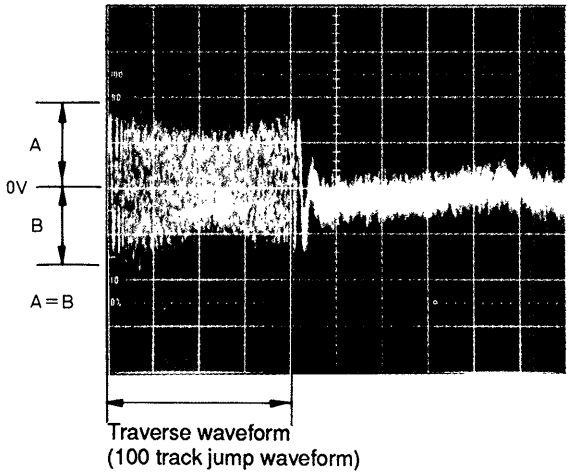
1. Connect the oscilloscope to test point TE on the MD main board.
2. Load a disc and set mode to PLAY.
3. Press button ⏮ or ⏭ (◀◀ or ▶▶) and observe the traverse waveform.
4. Adjust RV501 so that the waveform is symmetric when cenetered at the level to be accessed.

Adjustment point: MD main board



* Traverse waveform: Tracking error waveform which is observed when the track is traversed.

Volt/div: 0.5V
Time/div: 2msec
Center 0V



Tracking gain adjustment (Coarse adjustment)

This adjustment is not required unless the following parts are replaced:

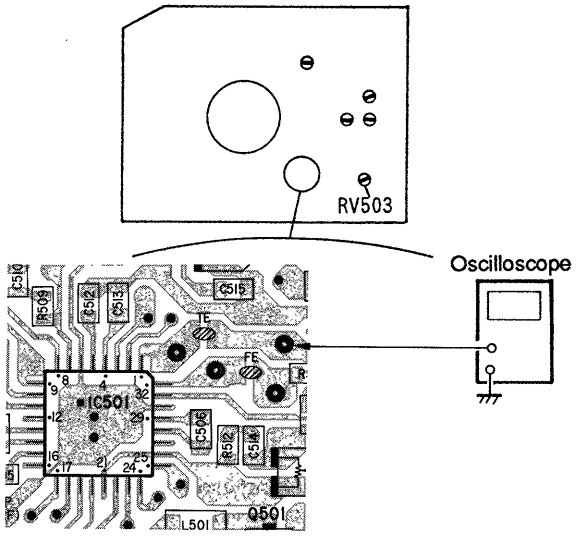
- Optical block
- BF503

Before starting this adjustment, complete the focus offset adjustment and the tracking off set adjustment.

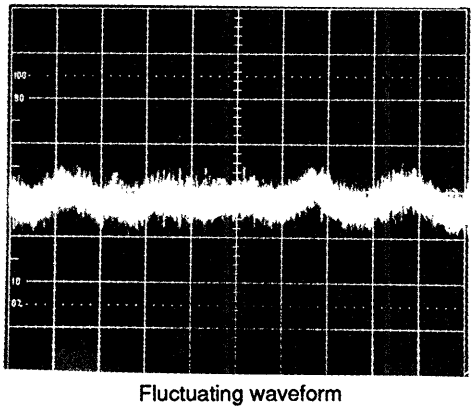
Adjustment:

1. Connect the oscilloscope to test point TE on the main board.
2. Load a disc and set mode to PLAY.
3. Turning RV503 clockwise, from the leftmost position, observe the waveform on the oscilloscope.
   Fix RV503 at the position where the waveform is become stable.

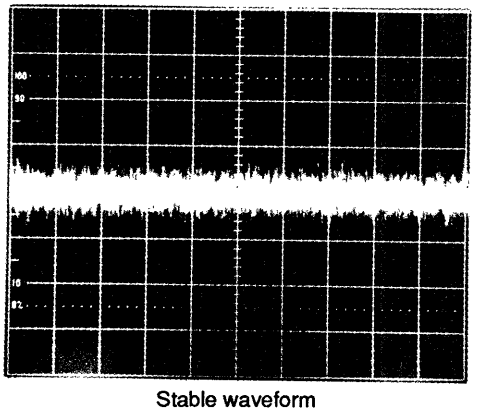
Adjustment point: MD main board



Volt/div: 0.5V
Tile/div: 2msec



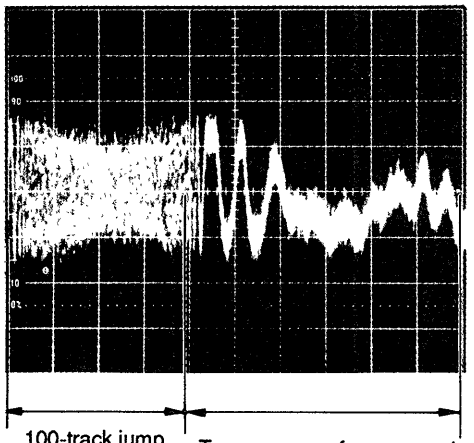
Fluctuating waveform



Stable waveform

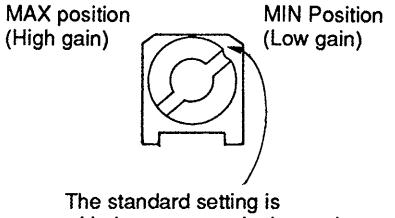
- If the gain is too low

  When music is selected by pressing button ⏮ or ⏭ , the tracking jump waveform is not focused completely and the music selection is delayed. (Break function does not work wall because its gain is too low.)



- If the gain is too high

  Noise due to scratches and dust is heard and the operation becomes unstable.



—RV503 standard setting—

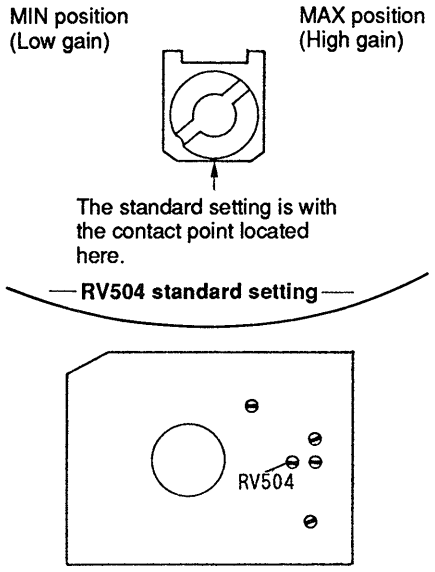
Focus gain adjustment (Coarse adjustment)

This adjustment is not required unless the following parts are replaced:

- Optical block
- RV404

Adjustment

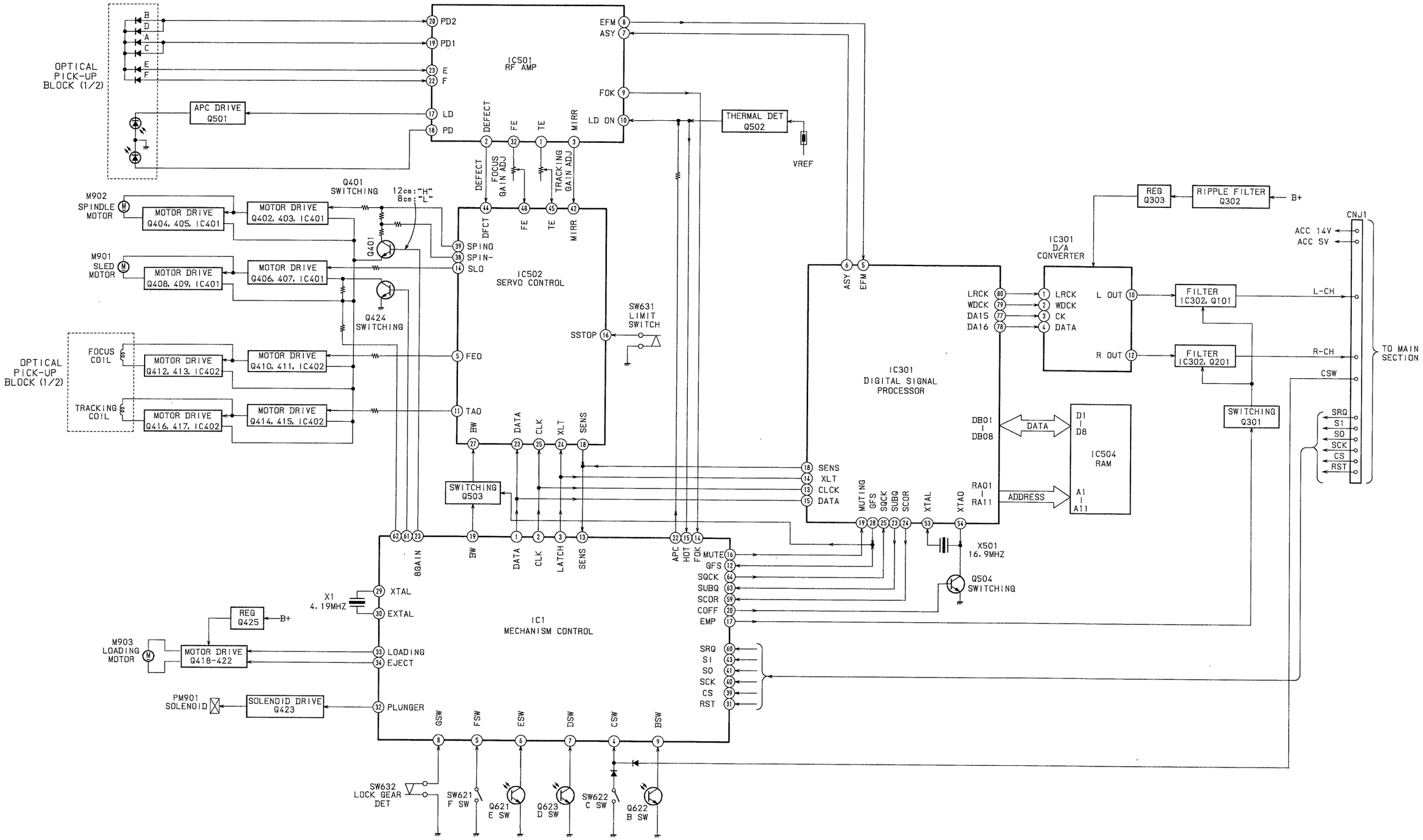
1. Set RV504 to the standard position.
2. Check whether operation noise (white noise type) caused by the double-axis device (lens section of the optical block) is abnormally loud.
   If the operation noise is too loud, turn RV504 slightly counterclockwise.



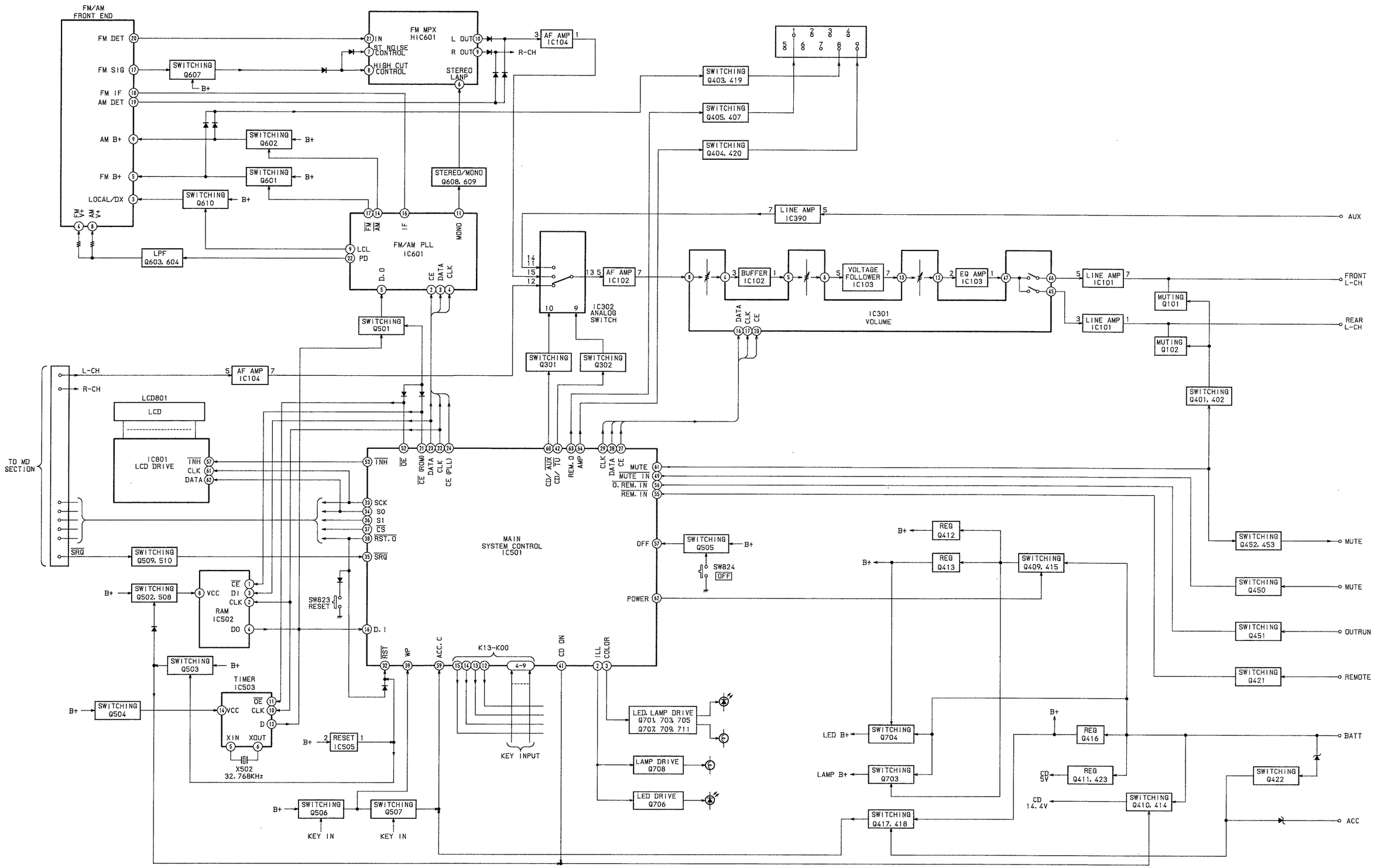
- If the gain is too low:
  Focus does not function and no music is selected.
- If the gain is too high:
  Noise caused by scratches and dust is heard and the operation becomes unstable.

SECTION 6
DIAGRAMS

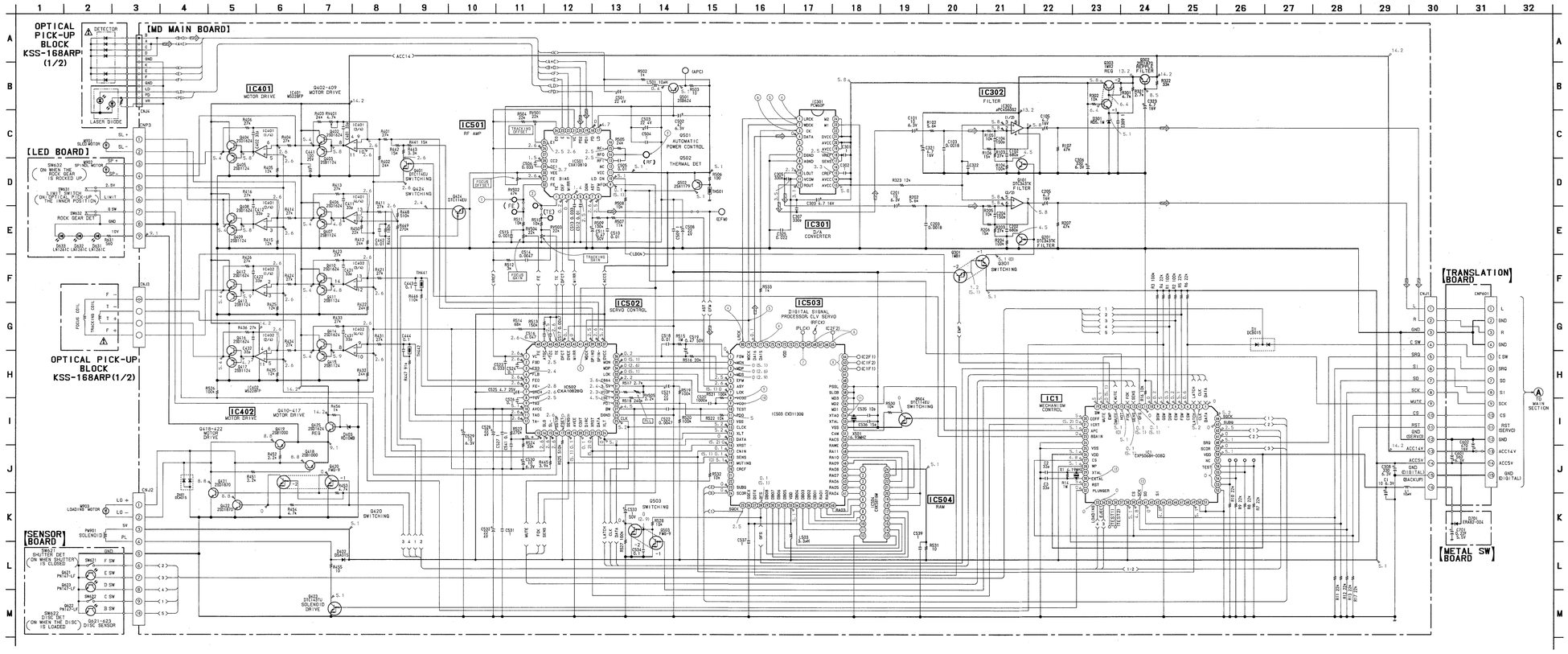
6-1. BLOCK DIAGRAM (MD Section)



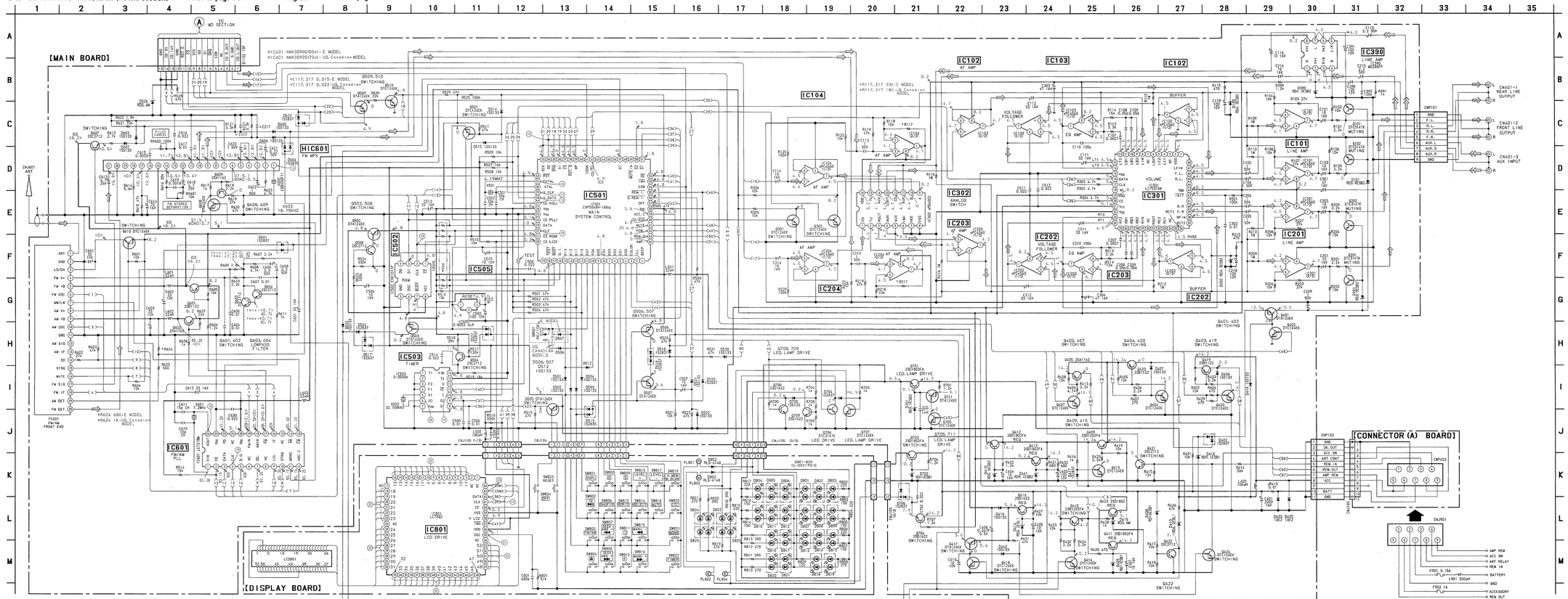
6-2. BLOCK DIAGRAM (MAIN Section)



6-5. SCHEMATIC DIAGRAM (MD Section)



6-8. SCHEMATIC DIAGRAM (MAIN Section) ● Refer to page 36 on IC block diagram. ● Refer to page 38 on waveforms.

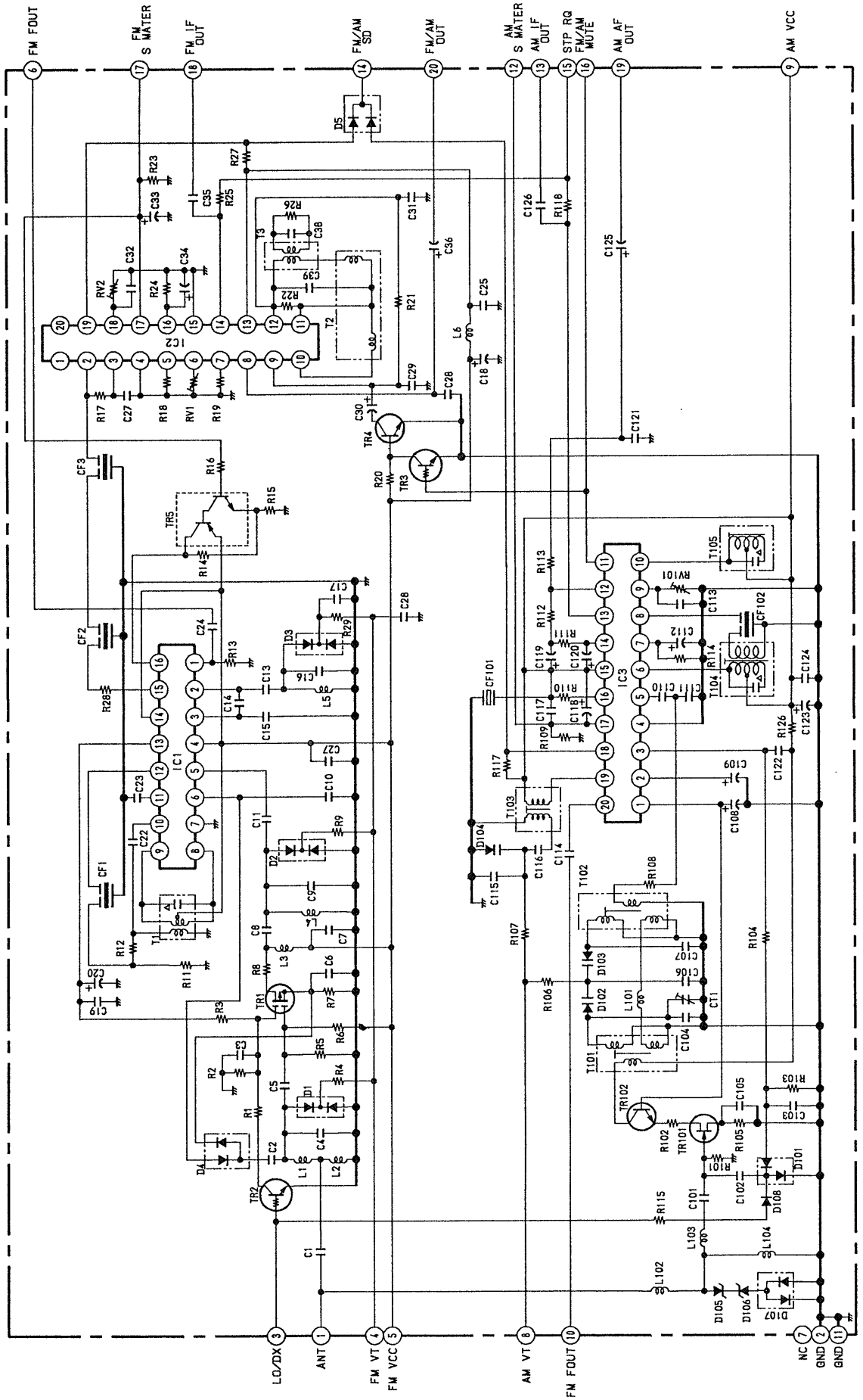


Note: (Main SECTION)

- All capacitors are in μF unless otherwise noted. pF: μ μF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- : B +line
- : adjustment for reacair.
- Power voltage is dc 14.4V and fed with requrated dc power.
  supply from battery, accessory terminals.
- Voltage and waveforms are dc with respect to ground under no signal conditions.
  no mark: STOP MODE
  ( ) : PLAY MODE
  ( ) : FM
  { } : AM
- Voltages are taken with a VOM. (Input impedance 10M Ω)
  Voltage variations may be noted due to normal production toreances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : FM
  : AUX
  : CD
- Switch

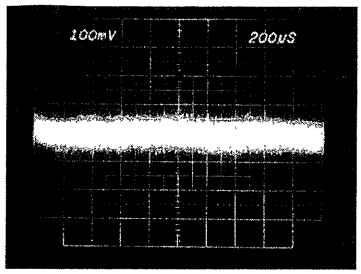
Ref.No.	Switch	Position
SWS01	9K/10K	9K
SWB01	DISP	OFF
SWB02	CD ▶II	OFF
SWB03	FM/AM	OFF
SWB04	⏏	OFF
SWB05	3	OFF
SWB06	SHUF/3	OFF
SWB07	SEEK AMS -◀◀	OFF
SWB08	SEEK AMS +▶▶	OFF
SWB09	5	OFF
SWB10	REP/2	OFF
SWB11	1	OFF
SWB12	4	OFF
SWB13	LEVEL +	OFF
SWB14	SELECT	OFF
SWB15	MANU - ◀◀	OFF
SWB16	MANU + ▶▶	OFF
SWB17	LEVEL -	OFF
SWB18	MUTE	OFF
SWB19	A.MEM/M.SCAN	OFF
SWB20	LCL	OFF
SWB21	MONO	OFF
SWB22	TIMER	OFF
SWB23	RESET	OFF
SWB24	OFF	OFF

6-9. SCHEMATIC DIAGRAM (TUNER Section)



6-11. WAVEFORMS

①



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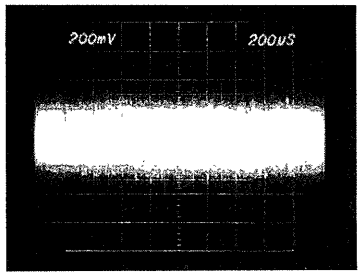

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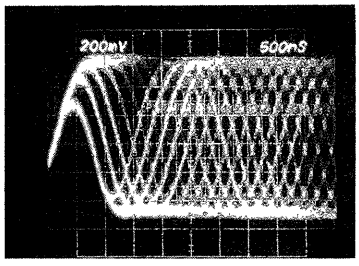

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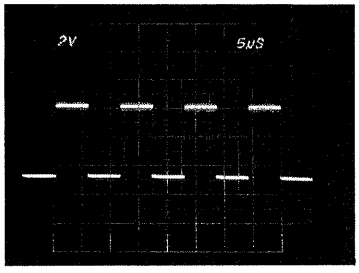

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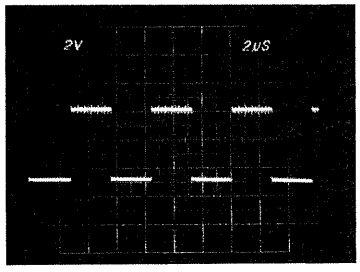

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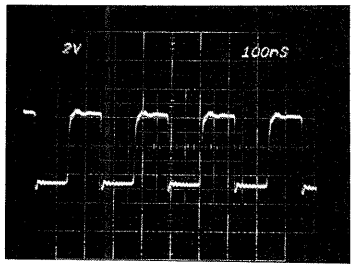

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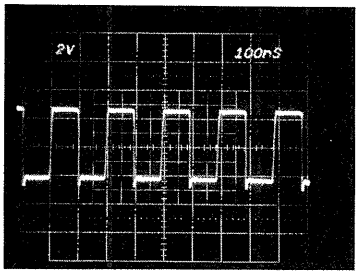

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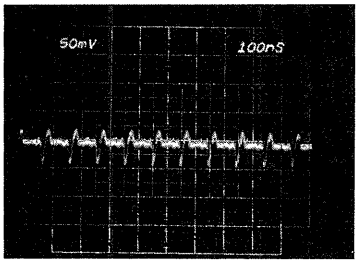

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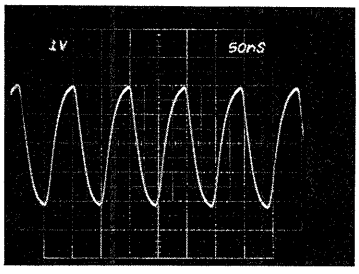

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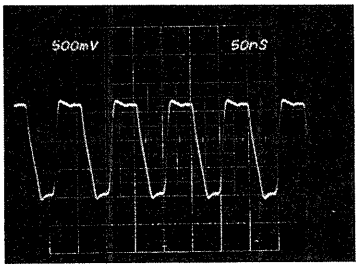

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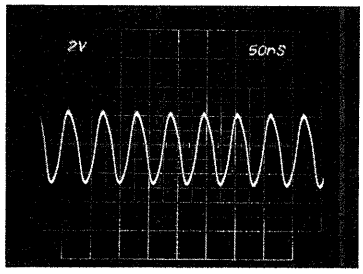

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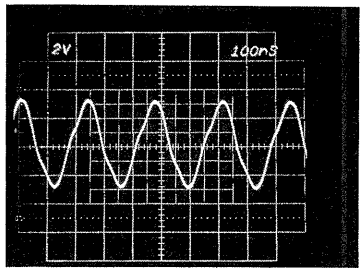

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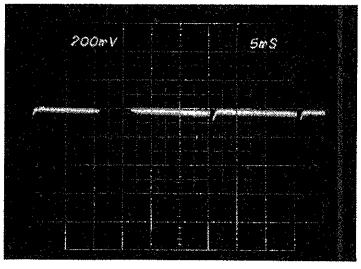

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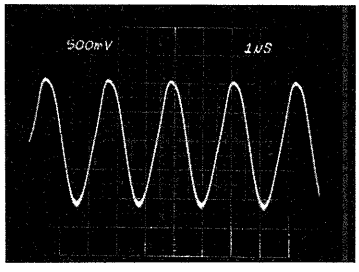

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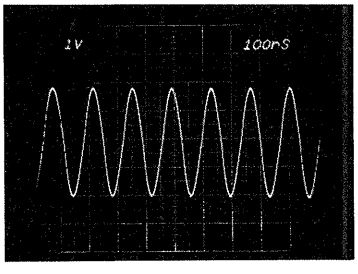
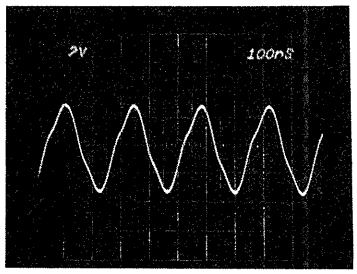
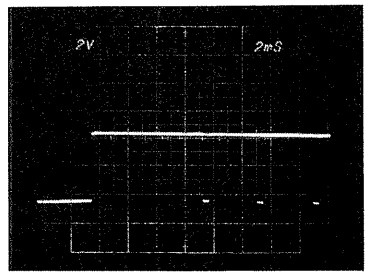
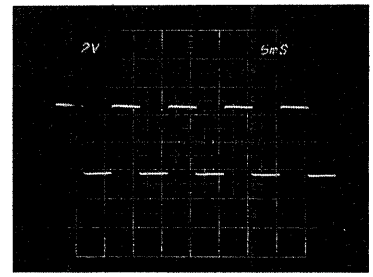
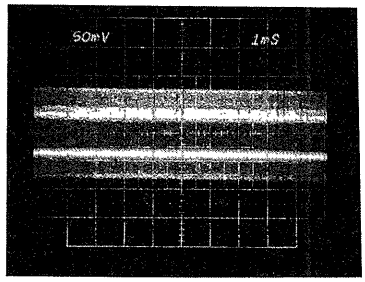
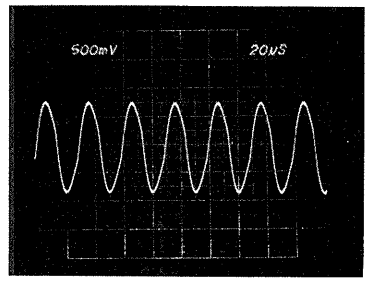
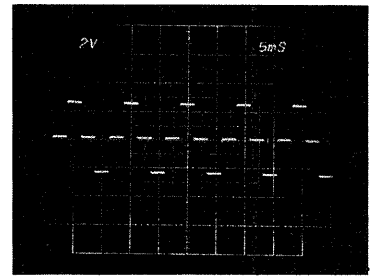
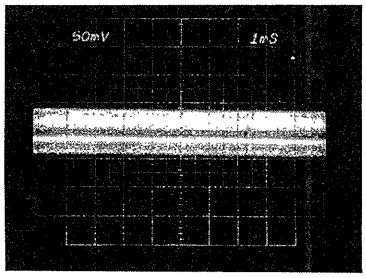
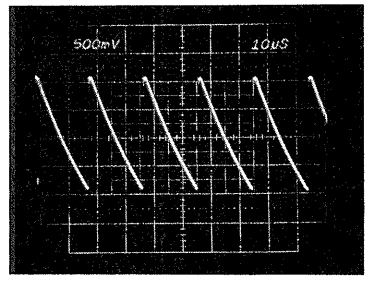


⑯  2V 100mS	⑲  2V 2mS	㉒  2V 5mS
⑰  50mV 1mS	⑳  500mV 20μS	㉓  2V 5mS
⑱  50mV 1mS	㉑  500mV 10μS	

SECTION 7
EXPLODED VIEWS

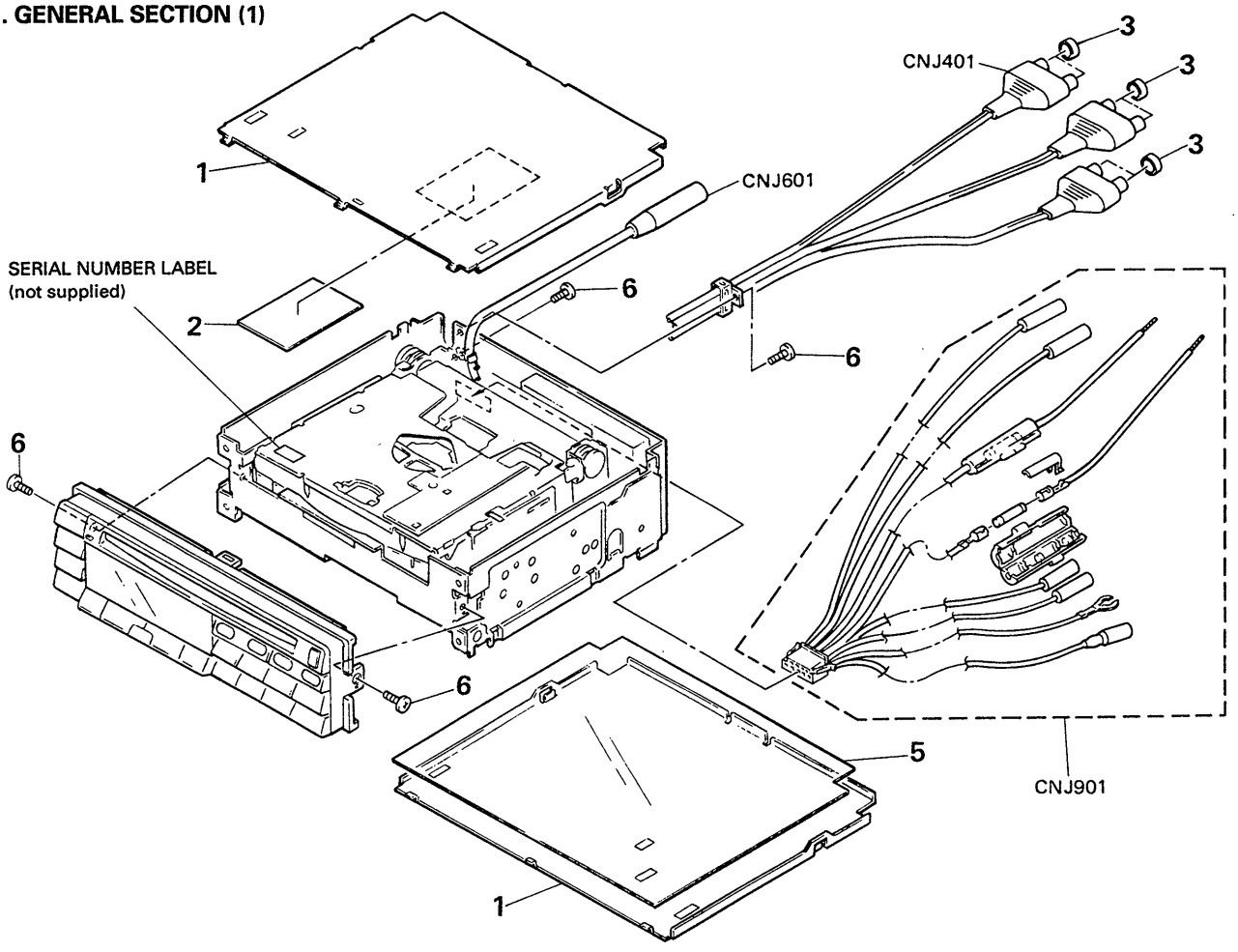
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

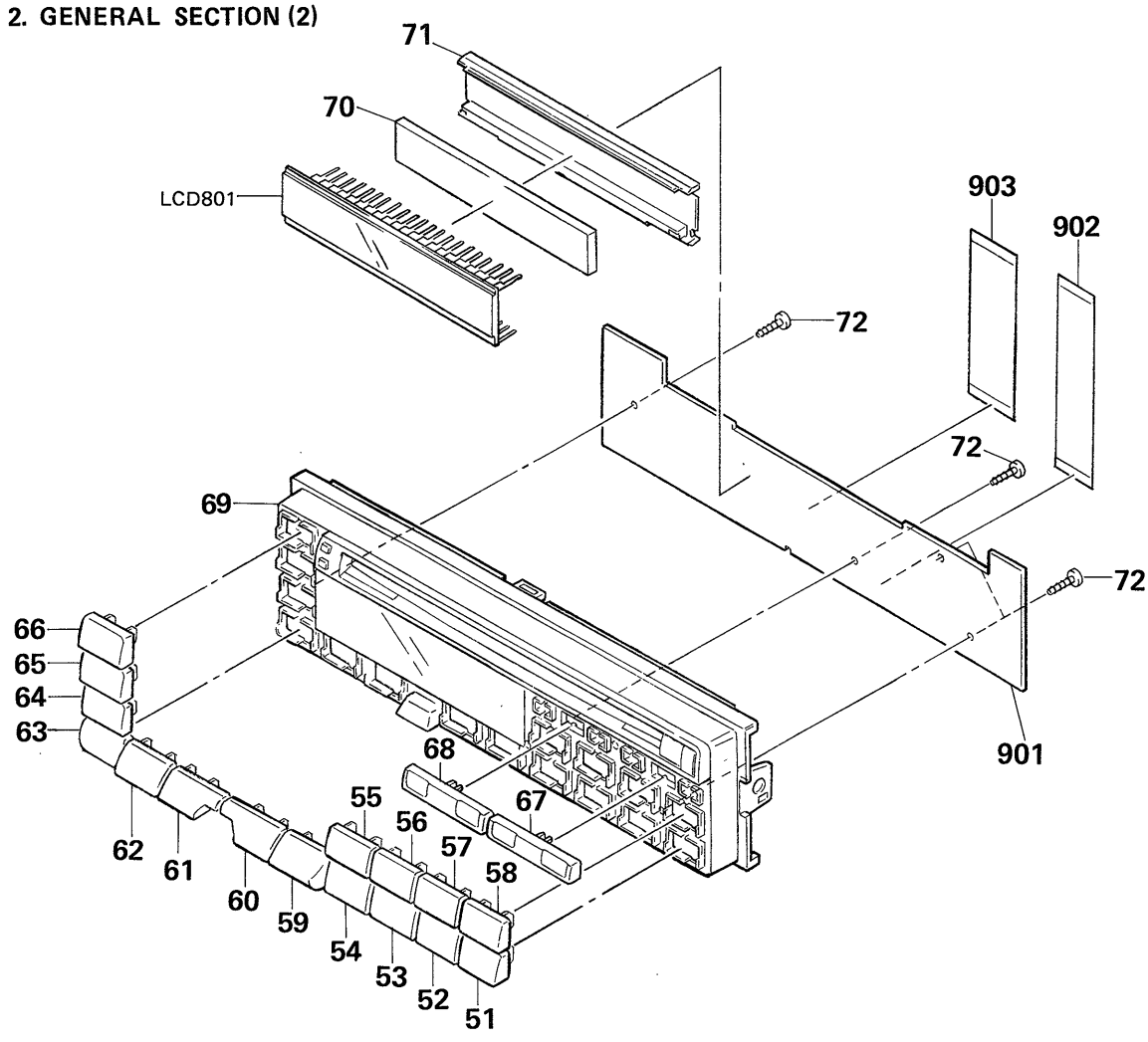
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

1. GENERAL SECTION (1)



No.	Part No.	Description	Remarks
1	*3-345-342-01	COVER	
2	*3-345-318-01	SHEET (MD), INSULATING	
3	3-339-410-01	COVER, PIN JACK	
5	*3-345-317-01	SHEET, INSULATING	
6	7-685-792-09	SCREW +PTT 2.6X6 (S)	
CN401	1-574-483-11	CORD (WITH CONNECTOR)	
CNJ601	1-574-545-11	CORD (WITH CONNECTOR)	
CNJ901	1-574-485-11	CORD (WITH CONNECTOR)	

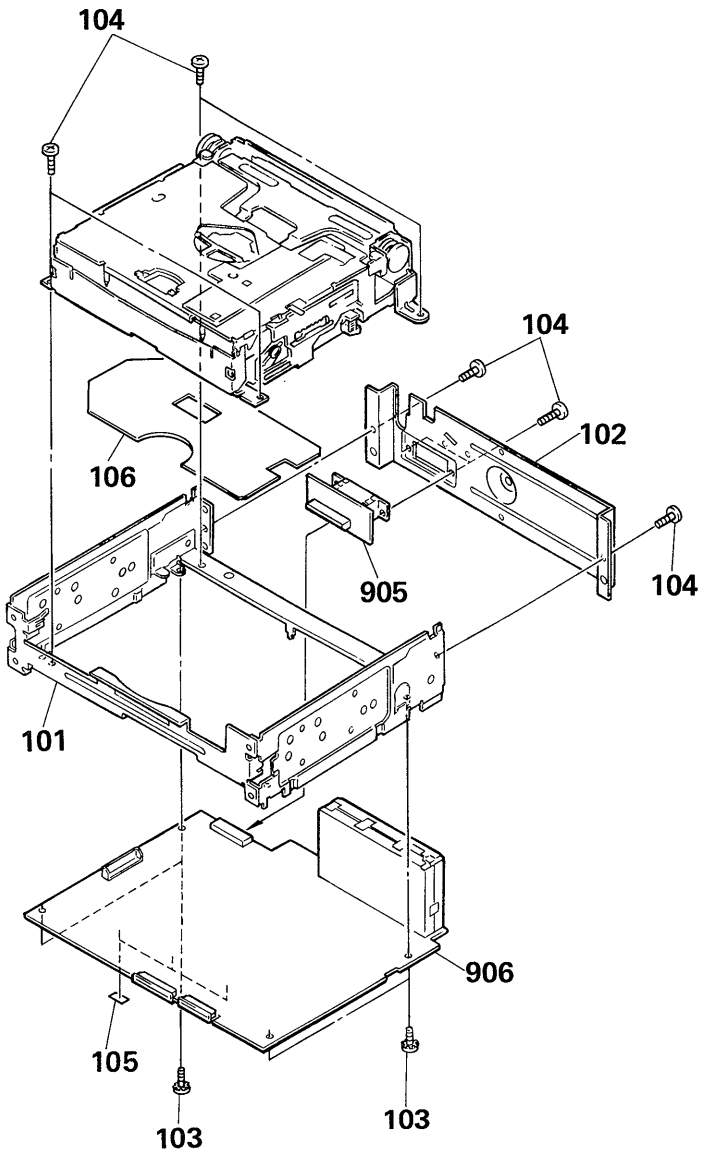
2. GENERAL SECTION (2)



No.	Part No.	Description	Remarks
51	3-345-326-01	BUTTON (PLAY)	
52	3-345-323-51	BUTTON (PRESET)	
53	3-345-323-41	BUTTON (PRESET)	
54	3-345-323-31	BUTTON (PRESET)	
55	3-345-323-01	BUTTON (PRESET)	
56	3-345-323-11	BUTTON (PRESET)	
57	3-345-323-21	BUTTON (PRESET)	
58	3-345-327-21	BUTTON (MN:N1W)	
59	3-345-331-01	BUTTON (SELECT)	
60	3-345-333-01	BUTTON (L-UP)	
61	3-345-334-01	BUTTON (L-DOWN)	
62	3-345-330-01	BUTTON (MUTE)	
63	3-345-325-01	BUTTON (M.SCAN)	
64	3-345-327-11	BUTTON (MN:N1W)	
65	3-345-327-01	BUTTON (MN:N1W)	

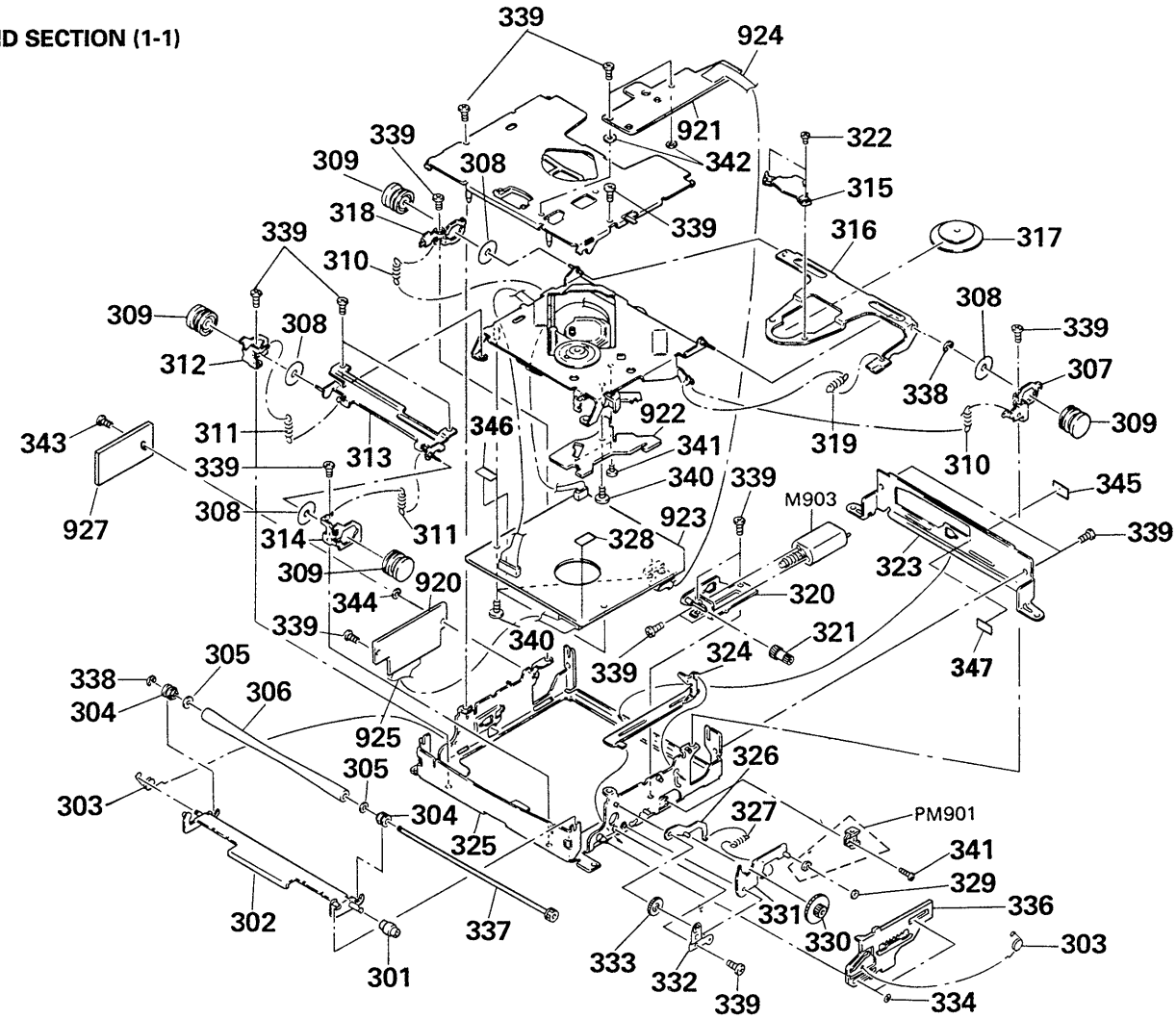
No.	Part No.	Description	Remarks
66	3-345-324-01	BUTTON (OFF)	
67	3-345-328-01	BUTTON (AMS)	
68	3-345-329-01	BUTTON (MANU)	
69	X-3339-415-2	(Canadian,E)...PANEL ASSY, FRONT	
	X-3339-418-1	(US).....PANEL ASSY, FRONT	
70	*3-345-319-01	PLATE, LIGHT GUIDE	
71	*3-345-335-01	HOLDER (LCD)	
72	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT	
901	*A-3219-191-A	PC BOARD ASSY, DISPLAY	
902	1-574-546-11	CABLE, FLAT FLEXIBLE (12 CORE)	
903	1-574-547-11	CABLE, FLAT FLEXIBLE (15 CORE)	
LCD801	1-808-662-11	DISPLAY PANEL, LIQUID CRYSTAL	

3. GENERAL SECTION (3)



No.	Part No.	Description	Remarks
101	*X-3339-416-1	CHASSIS ASSY	
102	*3-345-336-01	PANEL, BACK	
103	3-344-501-11	SCREW (+ PTT 3X8), GROUND POINT	
104	7-685-792-09	SCREW +PTT 2.6X6 (S)	
105	9-911-840-XX	CUSHION, CASSETTE LID	
106	*3-345-368-01	PLATE, SHIELD	
905	*1-629-980-11	PC BOARD, CONNECTOR (A)	
906	*A-3216-737-A	(E).....PC BOARD ASSY, MAIN	
	*A-3216-742-A	(US,Canadian)...PC BOARD ASSY, MAIN	

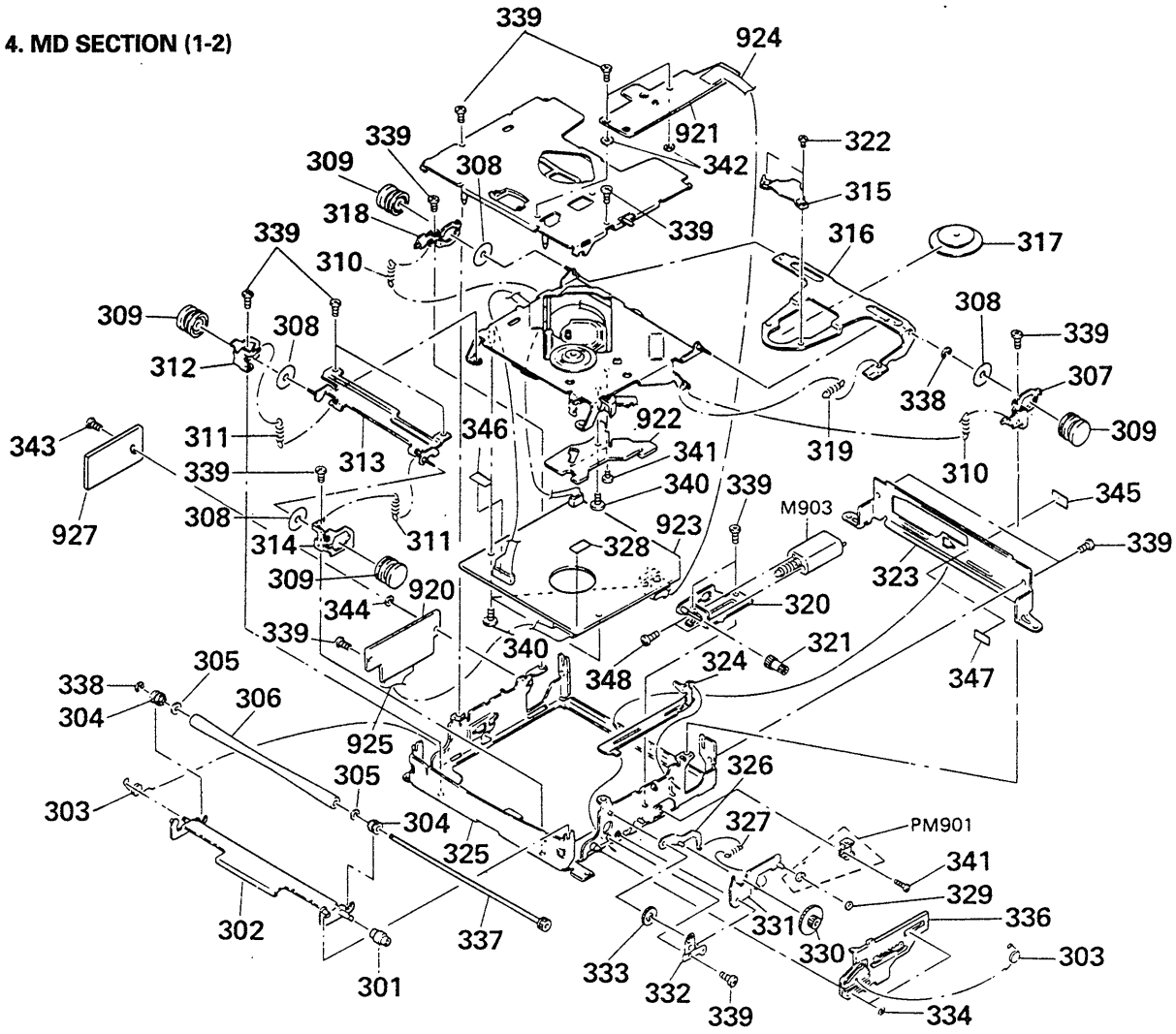
4. MD SECTION (1-1)



No.	Part No.	Description	Remarks
301	3-351-449-01	SLEEVE	
302	*X-3351-409-1	RACKET (ROLLER) ASSY	
303	3-351-437-01	SPRING (ROLLER)	
304	3-351-416-01	BEARING (ROLLER SHAFT)	
305	3-701-438-21	WASHER	
306	3-323-231-02	ROLLER (LOWER)	
307	*3-351-411-01	BRACKET (DAMPER D)	
308	3-323-263-01	WASHER, TEFLON	
309	3-330-929-01	DAMPER (S), HYPER	
310	3-351-444-01	SPRING (FLOATING A, B), TENSION	
311	3-351-445-01	SPRING (FLOATING C, D), TENSION	
312	*3-351-409-01	BRACKET (DAMPER B)	
313	*X-3351-410-1	BRACKET (F) ASSY	
314	*3-351-410-01	BRACKET (DAMPER C)	
315	3-342-625-01	RETAINER (S2), THRUST	
316	*3-351-453-01	ARM, CHUCKING	
317	3-348-558-01	PLATE (F), CHUCK	
318	*3-351-408-01	BRACKET (DAMPER A)	
319	3-351-443-01	SPRING (CHUCKING), TENSION	
320	*X-3351-401-1	BRACKET (M) ASSY	
321	3-351-413-01	GEAR (B)	
322	7-627-552-18	SCREW, PRECISION +P 1.7X1.6	
323	*3-351-457-01	BRACKET (REAR A)	
324	*X-3351-405-1	LEVER (CH RELEASE) ASSY	
325	*X-3351-412-1	CHASSIS (MAIN) ASSY	
326	*X-3351-406-1	LEVER (GEAR C) ASSY	
327	3-351-463-01	SPRING (SW LEVER 2), TENSION	
328	*3-351-466-01	SHEET (TH1)	

No.	Part No.	Description	Remarks
329	3-315-384-11	WASHER, STOPPER	
330	3-351-438-01	GEAR, CAM	
331	X-3351-402-1	LEVER (SW) ASSY	
332	3-351-441-01	RETAINER (SIDE GEAR)	
333	3-351-414-01	GEAR (C)	
334	3-578-224-00	WASHER	
336	3-351-456-01	LEVER (L, E)	
337	X-3351-413-1	SHAFT (ROLLER)	
338	7-624-104-04	STOP RING 2.0, TYPE -E	
339	7-627-553-27	SCREW, PRECISION +P 2X2.5	
340	7-621-772-08	SCREW +B 2X3	
341	7-627-850-57	SCREW, PRECISION +P 1.4X3.5	
342	3-892-464-01	SPACER, PC BOARD	
343	7-627-554-27	SCREW, PRECISION +P 2X6	
344	3-345-381-02	SPACER	
345	*3-351-470-01	SHEET	
346	*3-351-467-01	SHEET (TH2)	
347	*3-351-464-01	SHEET (SM)	
920	*1-628-911-11	PC BOARD, TRANSLATION	
921	*1-628-910-11	PC BOARD, SENSOR	
922	*1-628-912-11	PC BOARD, LED	
923	*A-3260-882-A	MOUNTED PCB, MD MAIN	
924	1-629-581-11	PC BOARD, SENSOR FILEXIBLE	
925	1-629-582-11	PC BOARD, TRANSLATION FLEXIBLE	
927	*1-628-450-11	METAL SW BOARD	
M903	A-3249-213-A	GEAR (A) ASSY (LOADING)	
PM901	1-454-461-11	SOLENOID, PLUNGER	

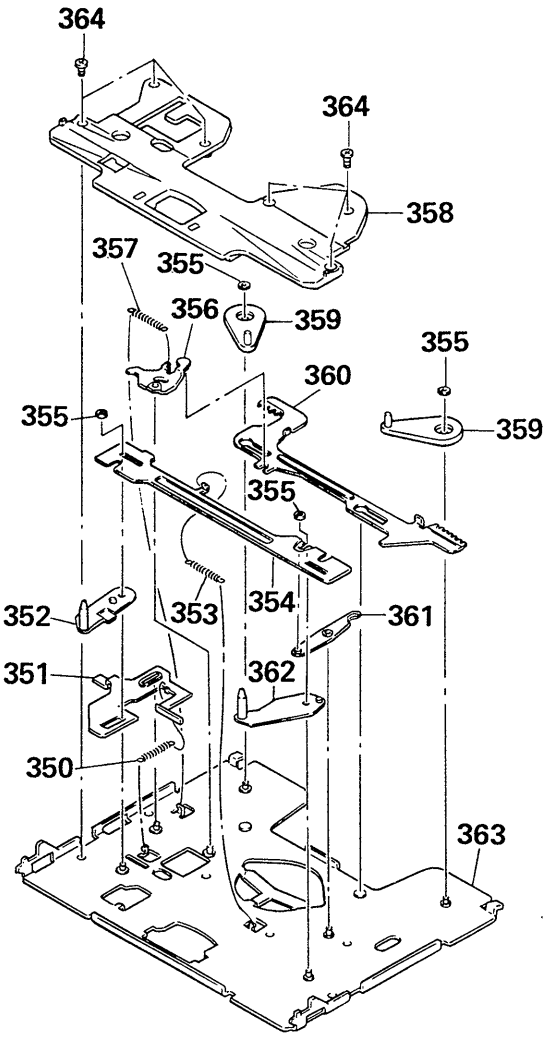
4. MD SECTION (1-2)



No.	Part No.	Description	Remarks
301	3-351-495-01	SLEEVE (2)	
302	*X-3351-422-1	BRACKET (ROLLER) ASSY	
303	3-351-437-01	SPRING (ROLLER)	
304	3-351-416-01	BEARING (ROLLER SHAFT)	
305	3-701-438-21	WASHER	
306	3-323-231-02	ROLLER (LOWER)	
307	*3-351-494-01	BRACKET (DAMPER C)	
308	3-323-263-01	WASHER, TEFLON	
309	3-330-929-01	DAMPER (S), HYPER	
310	3-351-445-01	SPRING (FLOATING C.D), TENSION	
311	3-351-444-01	SPRING (FLOATING A.B), TENSION	
312	*3-351-493-01	BRACKET (DAMPER B)	
313	*X-3351-423-1	BRACKET (F) ASSY	
314	*3-351-492-01	BRACKET (DAMPER A)	
315	3-342-625-01	RETAINER (S2), THRUST	
316	*3-351-453-01	ARM, CHUCKING	
317	3-348-558-01	PLATE (F), CHUCK	
318	*3-351-411-01	BRACKET (DAMPER D)	
319	3-351-443-01	SPRING (CHUCKING), TENSION	
320	*X-3351-419-1	BRACKET (M) ASSY	
321	3-351-498-01	GEAR (B)	
322	7-627-552-18	SCREW, PRECISION +P 1.7X1.6	
323	*3-351-483-01	BRACKET (REAR A)	
324	*X-3351-418-1	LEVER (CH RELEASE) ASSY	
325	*X-3351-417-2	CHASSIS (MAIN) ASSY	
326	*X-3351-420-1	LEVER (GEAR C) ASSY	
327	3-351-463-01	SPRING (SW LEVER 2), TENSION	
328	*3-351-466-01	SHEET (TH1)	

No.	Part No.	Description	Remarks
329	3-315-384-11	WASHER, STOPPER	
330	3-351-438-01	GEAR, CAM	
331	*X-3351-421-1	LEVER (SW) ASSY	
332	*3-351-482-01	RETAINER (SIDE GEAR)	
333	3-351-414-01	GEAR (C)	
334	3-578-224-00	WASHER	
336	3-351-456-01	LEVER (L, E)	
337	X-3351-413-1	SHAFT (ROLLER)	
338	7-624-104-04	STOP RING 2.0, TYPE -E	
339	7-627-553-28	SCREW, PRECISION +P 2X2.5	
340	7-621-772-08	SCREW +B 2X3	
341	7-627-850-57	SCREW, PRECISION +P 1.4X3.5	
342	3-892-464-01	SPACER, PC BOARD	
343	7-627-554-27	SCREW, PRECISION +P 2X6	
344	3-345-381-02	SPACER	
345	*3-351-470-01	SHEET	
346	*3-351-467-01	SHEET (TH2)	
347	*3-351-464-01	SHEET (SM)	
348	7-627-553-37	SCREW, PRECISION +P 2X3	
920	*1-628-911-11	PC BOARD, TRANSLATION	
921	*1-628-910-11	PC BOARD, SENSOR	
922	*1-628-912-11	PC BOARD, LED	
923	*A-3260-882-A	MOUNTED PCB, MD MAIN	
924	1-629-581-11	PC BOARD, SENSOR FILEXIBLE	
925	1-629-582-11	PC BOARD, TRANSLATION FLEXIBLE	
927	*1-628-450-11	METAL SW BOARD	
M903	A-3249-213-A	GEAR (A) ASSY (LOADING)	
PM901	1-454-461-11	SOLENOID, PLUNGER	

5. MD SECTION (2-1)

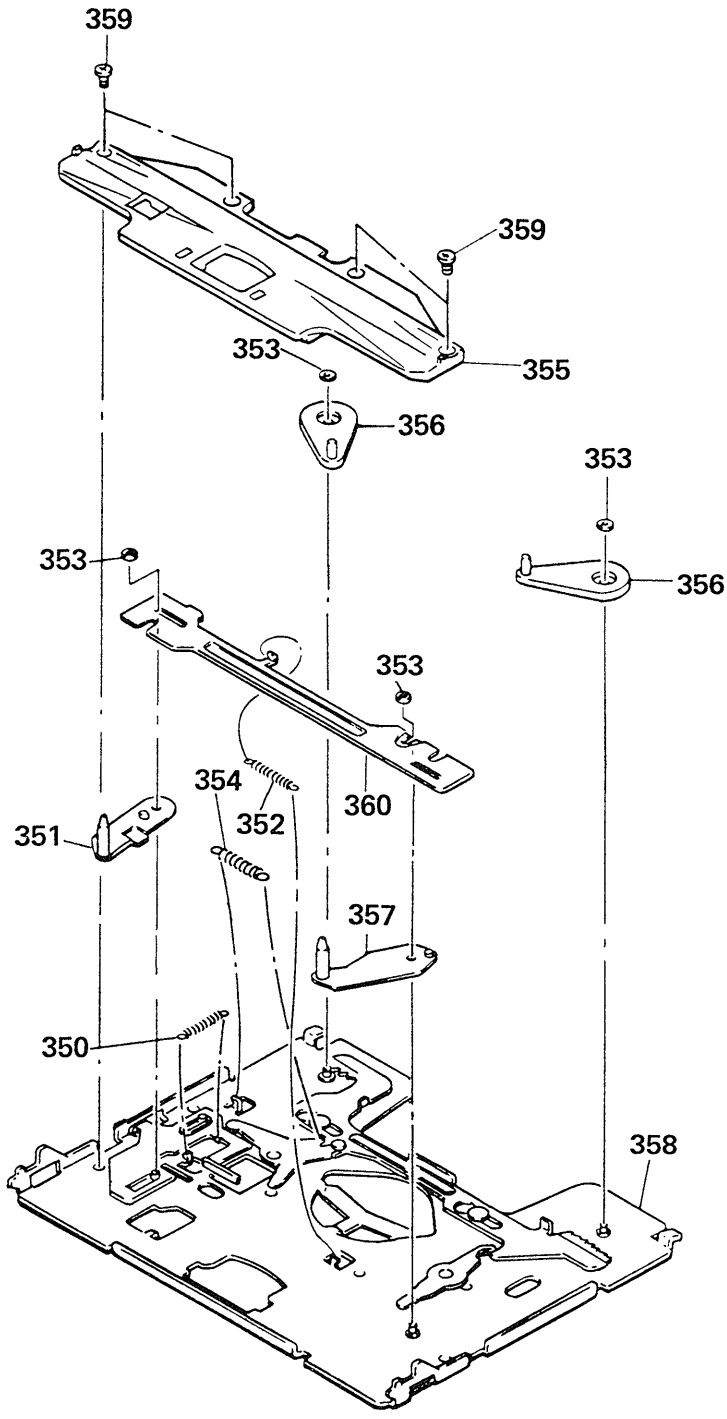


No.	Part No.	Description	Remarks
350	3-351-448-01	SPRING (LOCK LEVER), TENSION	
351	3-351-434-01	LEVER (LOCK)	
352	X-3351-404-1	LEVER (D DETECTION RIGHT) ASSY	
353	3-351-447-01	SPRING (JOINT F), TENSION	
354	3-351-402-01	JOINT (F)	
355	3-578-224-00	WASHER	
356	X-3351-407-1	JOINT (R) ASSY	
357	3-351-446-01	SPRING (JOINT R), TENSION	

No.	Part No.	Description	Remarks
358	3-351-460-01	GUIDE (DISK)	
359	3-351-432-01	GEAR (DS)	
360	3-351-433-01	LEVER (DS)	
361	X-3351-408-1	JOINT (M) ASSY	
362	X-3351-403-1	LEVER (D DETECTION LEFT) ASSY	
363	*X-3351-411-1	CHASSIS (T) ASSY	
364	7-627-553-27	SCREW, PRECISION +P 2X2.5	

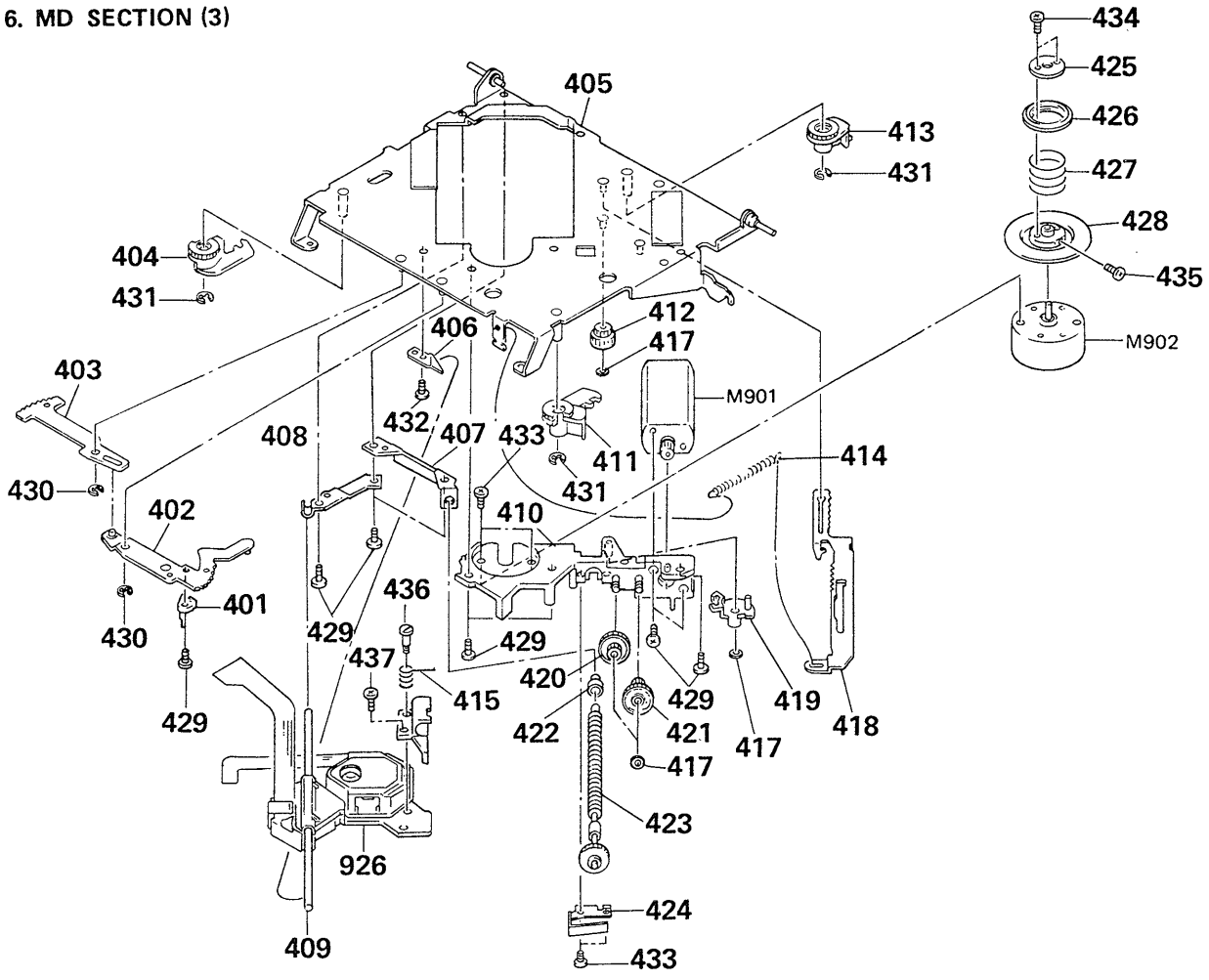
Serial number 200,001 and latter.

5. MD SECTION (2-2)



No.	Part No.	Description	Remarks
350	3-351-448-01	SPRING (LOCK LEVER), TENSION	
351	*X-3351-426-1	LEVER (D DETECTION R2) ASSY	
352	3-351-447-02	SPRING (JOINT F), TENSION	
353	3-578-224-00	WASHER	
354	3-351-446-01	SPRING (JOINT R), TENSION	
355	3-351-496-01	GUIDE (DISK 2)	
356	3-351-432-01	GEAR (DS)	
357	*X-3351-425-1	LEVER (D DETECTION L2) ASSY	
358	*X-3351-424-1	CHASSIS (T2) ASSY	
359	7-627-553-37	SCREW, PRECISION +P 2X3	
360	*3-351-489-02	JOINT (F2)	

6. MD SECTION (3)

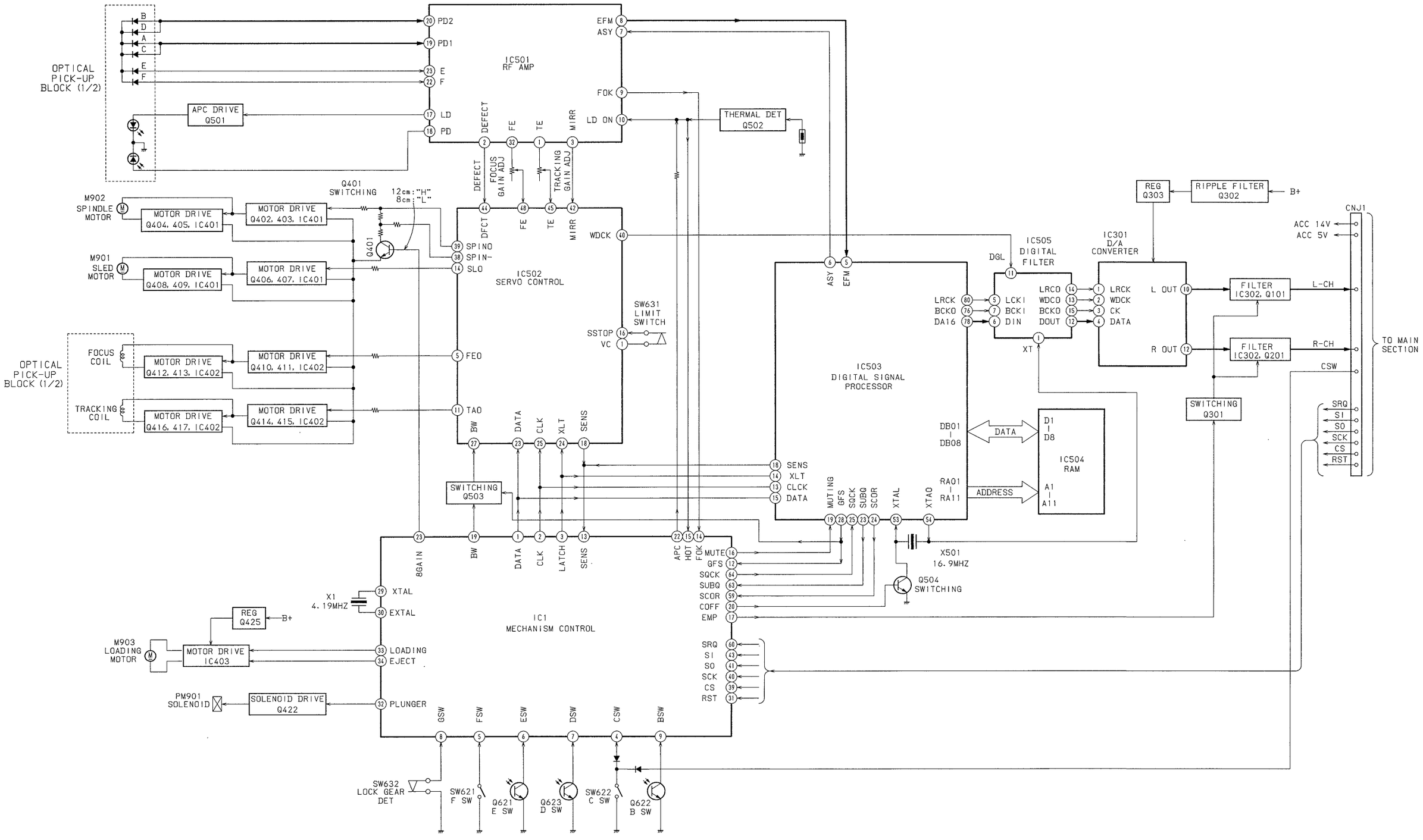


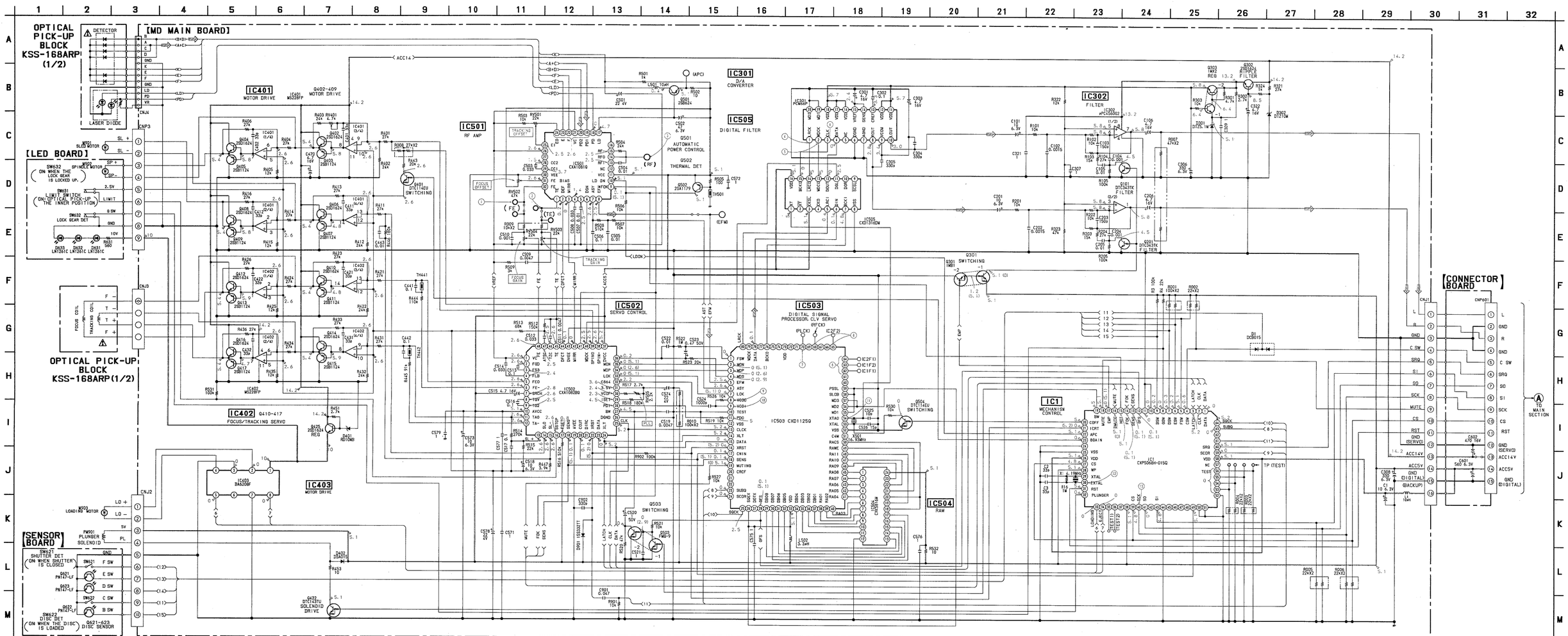
No.	Part No.	Description	Remarks
401	*2-643-407-01	PLATE, SWITCH	
402	*X-2641-534-1	LEVER (A) ASSY, LOCK	
403	*2-641-582-01	LEVER (B), LOCK	
404	2-643-414-02	GEAR (B), LOCK	
405	*X-2641-536-2	CHASSIS ASSY, MAIN	
406	2-643-402-01	RETAINER (B), SHAFT	
407	2-643-403-01	RETAINER, FEED SCREW	
408	2-643-401-01	RETAINER (A), SHAFT	
409	2-640-632-01	SHAFT, GUIDE	
410	*X-2641-535-2	CHASSIS ASSY, SUB	
411	2-643-413-02	GEAR (A), LOCK	
412	2-643-405-01	WHEEL, WORM	
413	2-641-599-02	GEAR (C), GEAR	
414	2-641-595-02	SPRING, TENSION	
415	2-643-420-01	SPRING	
416	2-643-412-02	NUT, FEED	
417	3-321-813-01	WASHER, COTTER POLYETHYLENE	
418	*2-641-583-02	LEVER (C), LOCK	
419	2-643-406-02	LEVER, SELECTION	
420	2-643-410-01	GEAR (E)	

No.	Part No.	Description	Remarks
421	2-643-409-01	GEAR (D)	
422	2-643-408-02	RETAINER, THRUST	
423	A-4910-184-B	SCREW ASSY, FEED	
424	2-643-404-01	SPRING	
425	2-640-650-01	STOPPER, RING	
426	2-643-418-01	RING, CENTER	
427	2-640-617-02	SPRING, COMPRESSION	
428	X-2641-541-1	TURNTABLE ASSY	
429	7-627-554-18	SCREW, PRECISION +P 2X3.5 TYPE1	
430	7-624-104-04	STOP RING 2.0, TYPE -E	
431	7-624-106-04	STOP RING 3.0, TYPE -E	
432	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
433	7-627-552-08	SCREW, PRECISION +P 1.7X2.5	
434	7-627-451-17	SCREW, PRECISION +K 1.4X2.5	
435	7-627-451-57	SCREW, PRECISION +K 1.4X4	
436	2-643-423-01	SCREW, SP	
437	7-627-852-17	+P 1.7X4	
M901	A-4910-183-A	MOTOR ASSY, SL (SLED)	
M902	1-541-448-41	MOTOR (SPINDLE)	

SECTION 6
DIAGRAMS

6-2. BLOCK DIAGRAM (MD Section)




OPTICAL PICK-UP BLOCK KSS-168ARP (1/2)
[MD MAIN BOARD]
[LED BOARD]
[SENSOR BOARD]
[CONNECTOR BOARD]
OPTICAL PICK-UP BLOCK KSS-168ARP(1/2)
IC401 MOTOR DRIVE
IC402 FOCUS/TRACKING SERVO
IC403 MOTOR DRIVE
IC501 RF AMP
IC502 SERVO CONTROL
IC503 DIGITAL SIGNAL PROCESSOR, CLV SERVO
IC504 RAM
IC301 D/A CONVERTER
IC505 DIGITAL FILTER
IC302 FILTER
IC1 MECHANISM CONTROL
Q501 AUTOMATIC POWER CONTROL
Q502 THERMAL DET
Q503 SWITCHING
Q301 SWITCHING
Q304 SWITCHING
Q401 SWITCHING
Q402-409 MOTOR DRIVE
Q410-417 FOCUS/TRACKING SERVO
Q421 SOLENOID DRIVE
Q422 SOLENOID DRIVE
TO MAIN SECTION
TP (TEST)

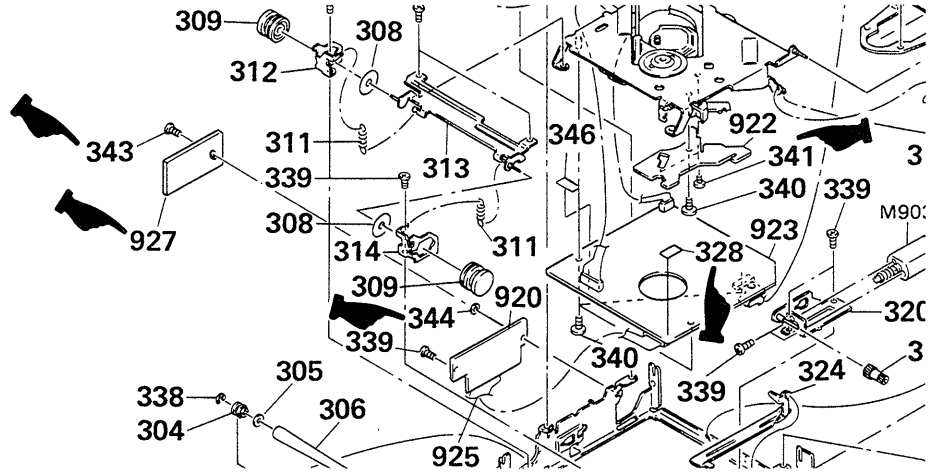
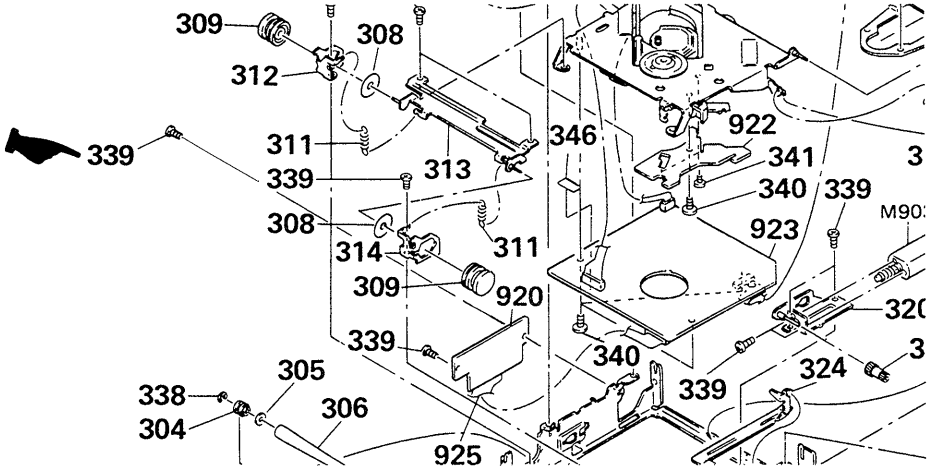
SECTION 7
EXPLODED VIEWS

FORMER Type		NEW Type	
927	METAL SW BOARD		Removed.
328	SHEET (P)		Removed.
341	SCREW, +P 1.4X3		
343	SCREW, +P 2X6	339	7-627-850-57 SCREW +P 1.4X3.5 7-627-553-27 SCREW +B 2X2.5
344	SPACER		Removed.

: Changed portion

FORMER Type

P43. 4. MD SECTION (1)



NEW Type